

Amendments to the Claims

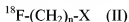
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A process for the production of an [^{18}F]fluorohaloalkane which comprises treatment of a solid support-bound precursor of formula (I):



wherein n is an integer of from 1 to 7 and X is chloro, bromo or iodo; with a source of $^{18}\text{F}^-$ in an organic solvent and optionally in the presence of a phase transfer catalyst to produce the [^{18}F]fluorohaloalkane of formula (II)



wherein n and X are as defined for the compound of formula (I), optionally followed by

- (i) removal of excess $^{18}\text{F}^-$ ~~, for example by ion exchange chromatography~~; and/or
- (ii) removal of organic solvent.

2. (Currently Amended) A process for the production of an [^{18}F]fluorohaloalkane according to claim 1 wherein n is an integer of 1 to 4, ~~preferably 1 or 2~~.

3. (Previously presented) A process for the production of an [^{18}F]fluorohaloalkane according to claim 1 wherein the compound of formula (II) prepared is selected from [^{18}F]fluorobromomethane, [^{18}F]fluoroiodomethane, [^{18}F]fluorobromoethane, [^{18}F]fluoroiodoethane, [^{18}F]fluorobromopropane, and [^{18}F]fluoroiodopropane.

4. (Withdrawn) A compound of formula (I) as defined in claim 1:



wherein n is an integer of from 1 to 7 and X is chloro, bromo or iodo.

5. (Withdrawn) A compound of formula (I) according to claim 4 wherein n is an integer of from 1 to 4, and is preferably 1 or 2.

6. (Withdrawn) A radiosynthesis kit for the preparation of an [^{18}F]fluorohaloalkane for use in PET chemistry, which comprises:

- (i) a vessel containing a compound of formula (I) as defined in claim 1; and
- (ii) means for eluting the vessel with a source of $^{18}\text{F}^-$; and
- (iii) an ion-exchange cartridge for removal of excess $^{18}\text{F}^-$.

7. (Withdrawn) A cartridge for a radiosynthesis kit which comprises:

- (i) a vessel containing a compound of formula (I) as defined in claim 1; and
- (ii) means for eluting the vessel with a source of $^{18}\text{F}^-$.

8. (New) A process for the production of an [^{18}F]fluorohaloalkane according to claim 1 wherein the source of $^{18}\text{F}^-$ is selected from Na^{18}F , K^{18}F , Cs^{18}F , tetraalkylammonium ^{18}F fluoride, and tetraalkylphosphonium ^{18}F fluoride.

9. (New) A process for the production of an [^{18}F]fluorohaloalkane according to claim 3 wherein n is an integer of 1 or 2.